

United States Environmental Protection Agency
Region 10
1200 Sixth Avenue
Seattle, Washington 98101

**AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM**

In compliance with the provisions of the Clean Water Act,
33 U.S.C. §1251 et seq., as amended by the Water Quality Act of 1987, P.L. 100-4, the
"Act",

Echo Bay Alaska, Inc.
A.J. Mine

is authorized to discharge from a facility to receiving waters named Gold Creek, at the
following locations:

<u>Outfall Serial Number</u>	<u>Latitude</u>	<u>Longitude</u>
001	58° 18' 26" N	134° 22' 41" W
002	58° 18' 28" N	134° 24' 05" W
003	58° 18' 30" N	134° 23' 1.2" W
004	58° 18' 19" N	134° 20' 1.4" W
005	58° 18' 25" N	134° 21' 51" W
006	58° 16' 47" N	134° 18' 13" W
007	58° 16' 45" N	134° 21' 11" W
008	58° 16' 20" N	134° 19' 11" W

and stormwater discharges to Sheep Creek.

in accordance with discharge point(s), effluent limitations, monitoring requirements and
other conditions set forth herein.

This permit shall become effective May 4, 1998

This permit and the authorization to discharge shall expire at midnight, May 5, 2003

Signed this 3rd day of April, 1998.

/s/ Phillip G. Millam

Philip G. Millam
Director, Office of Water, Region 10
U.S. Environmental Protection Agency

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I. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the effective period of this permit, the Permittee is authorized to discharge from outfalls 001 and 002 subject to the restrictions set forth herein. This permit does not authorize the discharge of any wastestreams, including spills and other unintentional or non-routine discharges of pollutants, that are not part of the normal operation of the facility as disclosed in the permit application, or any pollutants that are not ordinarily present in such wastestreams.

A. Limitations and Monitoring Requirements

1. Sampling requiring monthly reporting. The Permittee shall limit discharges and conduct monitoring as specified in Table 1 below. All figures represent maximum effluent limits unless otherwise indicated. The Permittee shall comply with the following effluent limits at all times unless otherwise indicated, regardless of the frequency of monitoring or reporting required by other provisions of this permit.

Table 1 - Effluent Limitations Outfall 001				
Parameters	Limits on Daily Discharge		Monitoring Requirements	
	Daily Maximum	Average Monthly	Frequency	Sample Type
Flow	-		Quarterly	Grab
Arsenic	-	-	Annual	Grab
Cadmium	100	50	Annual	Grab
Copper	300	150	Annual	Grab
Iron	-	-	Annual	Grab
Lead	19.1	9.5	Quarterly	Grab
Manganese	-	-	Annual	Grab
Mercury, Total	2	1	Annual	Grab
Nickel	-	-	Annual	Grab
Selenium	-	-	Annual	Grab
Silver	-	-	Annual	Grab
Zinc	241.1	170.6	Quarterly	Grab
TSS, mg/L	30	20	Quarterly	Grab
TDS, mg/L	1170	-	Quarterly	Grab
Sulfate, mg/L	780	-	Quarterly	Grab
Oil & Grease	No visible sheen		Monthly	Grab
pH, Std. Units	6.5 - 8.5		Monthly	Grab
Metals measured in Total Recoverable unless noted. Units are $\mu\text{g/L}$ unless noted.				

1. Sampling shall occur after the discharge pipe prior to flow into Gold Creek.

Table 1A - Effluent Limitations Outfall 002				
Parameters	Limits on Daily Discharge		Monitoring Requirements	
	Daily Maximum	Average Monthly	Frequency	Sample Type
Flow	-		Continuous Recording	
Arsenic	-	-	Annual	Grab
Cadmium	100	50	Annual	Grab
Copper	300	150	Annual	Grab
Iron	-	-	Annual	Grab
Lead	600	300	Annual	Grab
Manganese	4635	--	Quarterly	Grab
Mercury, Total	2	1	Annual	Grab
Nickel	-	-	Annual	Grab
Selenium	-	-	Annual	Grab
Silver	-	-	Annual	Grab
Zinc	1500	750	Annual	Grab
TSS, mg/L	30	20	Quarterly	Grab
TDS, mg/L	9900	-	Quarterly	Grab
TAH, mg/L	10	-	Weekly	Grab
Sulfate, mg/L	6600	-	Weekly	Grab
Oil & Grease	No visible sheen		Weekly	Grab
Conductivity, mmhos	-		Continuous Monitoring	
pH, Std. Units	6.5 - 8.5		Monthly	Grab
Metals measured in Total Recoverable unless noted. Units are $\mu\text{g/L}$ unless noted.				

2. Outfall 002 may only discharge when the receiving water flow is 30 cfs or greater.
3. Sampling shall occur after discharge through the filtration plant and prior to discharge into Gold Creek.

B. Whole Effluent Toxicity (WET) Testing

Beginning June 1, 1998, and continuing for at least one year, the permittee shall conduct quarterly toxicity tests on grab effluent samples. Samples shall be taken at outfalls 001 and 002.

1. Organisms and protocols
 - (1) The permittee shall conduct tests with the cladoceran, *Ceriodaphnia dubia* survival and reproduction test, the fathead minnow, *Pimephales promelas* larval survival and growth test and the green alga, *Selenastrum capricornatum* for the first year. After this screening period, if necessary, continued monitoring shall be conducted on the most sensitive species.
 - a. Each subsequent year that WET testing continues, the permittee shall re-screen for one quarter and continue to monitor the rest of the year with the most sensitive species. If testing continues longer than one year, the screening period shall occur in a different quarter from the year before.
 - b. The presence of chronic toxicity shall be estimated as specified in *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, Third Edition, EPA-600-4-91-002, July 1994.
 - c. Results shall be reported in TUc (chronic toxic units). $TUc = 100/NOEC$ (in percent effluent).
 - d. If, at the end of one year, if no more than two of the results exceed the following, and no substantial changes to operations have been changed, whole effluent toxicity testing will be required only once in the fourth year, before renewal of the permit.

Outfall Number	NOEC results
001	2.3 TU _c
002	18.7 TU _c

The permittee must notify EPA and ADEC that no further testing will be conducted.

2. Quality assurance

- a. A series of five dilutions and a control will be tested. The series shall include the receiving water concentration (RWC), two dilutions above the RWC, and two dilutions below the RWC. For Outfall 001, the RWC is **25.6 % effluent**. For Outfall 002, the RWC is **3.0 % effluent**.
- b. Concurrent testing with reference toxicants shall also be conducted if organisms are not cultured in-house. Otherwise, monthly testing with reference toxicants is sufficient.
- c. If either of the reference toxicant test or the effluent tests do not meet all test acceptability criteria as specified in the manual, then the permittee must re-sample and re-test as soon as possible.
- d. Control and dilution water should be lab water as described in the manual. If the dilution water used is different from the culture water, a second control, using culture water shall also be used. Receiving water may be used as control and dilution water upon notification of EPA and ADEC. In no case shall water that has not met test acceptability criteria be used as dilution water.

3. Reporting

- a. The permittee shall submit the results of the toxicity tests in TU_cs with the discharge monitoring reports (DMR) for the month in which the test is conducted.
- b. The full report shall be submitted by the end of the month according to the following schedule:

Toxicity Testing Period	Toxicity Test Results Due
January - March	April
April - June	July
July - September	October
October - December	January

- c. Along with the results, the permittee shall include:
- (1) the dates of sample collection and initiation of each toxicity test;
 - (2) the type of activity occurring;
 - (3) the flow rate at the time of sample collection; and
 - (4) the chemical parameter monitoring required for the outfall(s) as defined in the permit.
- d. Test results for chronic tests shall also be reported according to the chronic manual chapter on Report Preparation, and shall be attached to the DMR. If the laboratory conducting the toxicity testing uses the TOXIS database, then the permittee shall also submit the data on an electronic disk.

4. Reopener

This permit may be modified in accordance with the requirements set forth at 40 CFR Parts 122 and 124, to include appropriate conditions to address demonstrated effluent toxicity based on newly available information, or to implement any EPA-approved new State water quality standards applicable to effluent toxicity.

C. Water Quality Monitoring Program Requirements.

1. Beginning May 1, 1998, and continuing monthly, the permittee shall conduct ambient sampling and monitoring for the parameters in Table 2 at three locations. The first location shall be upstream of the Gold Creek Drainage Tunnel. The second and third shall be downstream of outfalls 001 and 002.

TABLE 2

Conductivity	Turbidity
Flow*	Temperature
* Flow shall be reported at GCF only	

- Beginning June 1, 1998 and continuing quarterly, the permittee shall conduct ambient sampling and monitoring for the parameters in Table 2A at three locations. The first location shall be upstream of the Gold Creek Drainage Tunnel. The second and third shall be downstream of outfalls 001 and 002.

TABLE 2A			
Arsenic	Manganese	TDS	**Acidity
	Zinc	**Alkalinity	pH
Lead	Sulfate	**Hardness	
* All metals shall be analyzed as Total Recoverable unless noted **Acidity, Alkalinity and Hardness shall be measured at the same time metals are analyzed			

- Beginning May 1, 1998 and continuing annually, receiving water confirmation monitoring shall be conducted for Outfall 003 (Ebner adit), and shall be conducted for all constituents in Tables 1 and 1A, except for flow and whole effluent toxicity.
- Beginning May 1, 1998 and continuing annually, receiving water confirmation monitoring shall be conducted for Outfalls 004 (Alexander Adit) and 005 ("00" Adit) at Station GCR for all constituents in Tables 1 and 1A except for flow and whole effluent toxicity.
- Beginning May 1, 1998 and continuing annually, the permittee shall conduct ambient sampling and monitoring for the parameters in Table 2B as well as those in Table 2A at three locations. The first location shall be upstream of the Gold Creek Drainage Tunnel. The second and third shall be downstream of outfalls 001 and 002.

TABLE 2B			
	Iron	Nitrate	**Alkalinity
Cadmium	Mercury, Total	TAH	**Hardness
Copper	Nickel	Oil & Grease (no visible sheen)	**Acidity
* All metals shall be analyzed as Total Recoverable unless noted **Acidity, Alkalinity and Hardness shall be measured at the same time metals are analyzed			

The location of the points downstream of outfalls 001 and 002 shall be submitted to EPA and Alaska Department of Environmental Conservation (ADEC) for review and approval within 15 days of the effective date of this permit. Instream confirmation monitoring shall occur annually within 50 feet downstream of the point of discharge for all constituents specified in Table 2.

- Ambient sampling shall be conducted as grab samples. Procedures developed in the Quality Assurance Project Plan (QAPP), permit part I.G., shall be used in handling, transporting and analysis of the samples. Quarterly sampling results shall be submitted with the DMR according to the following schedule:

Table 3	
Quarterly Testing Period	Quarterly Test Results Due
January - March	April
April - June	July
July - September	October
October - December	January

- Monitoring samples shall be taken from the discharge pipe, as specified in Tables 2, 2A, and 2B, after filtration, but prior to flow into Gold Creek.

D. Monitoring - 002

- The Permittee shall conduct sampling and analysis at each level for the parameters listed in Table 4, below. The sampling shall begin at the

existing water depth and resume at each level until the pumping is terminated.

TABLE 4	
Copper*	Total Aromatic Hydrocarbons (TAH)
Lead*	Oil and Grease (no visible sheen)
Manganese*	Ethyl Glycol
* All metals shall be analyzed as Total Recoverable	

E. Detection Levels

- For purposes of reporting on the Discharge Monitoring Report (DMR), the permittee shall use the reporting threshold equivalent to the Interim Minimum Level (Interim ML) for both ambient monitoring and for those parameters with water quality-based limits below detection levels. See Table 5. EPA has determined that it will use the interim minimum level as the compliance evaluation level for these parameters.

Table 5			
Parameter	Sampling Method	Estimated Detection Level, $\mu\text{g/L}$	Interim Minimum Level & Lowest Calibration, $\mu\text{g/L}$
Aluminum	EPA Method 202.2 AA, furnace	3	9
Arsenic	EPA Method 206.2 AA, furnace	1	3
Cadmium	EPA Method 213.2 AA, furnace	0.1	1
Chromium	EPA Method 218.3 AA, extraction	1	3
Copper	EPA Method 220.2 AA, furnace	1	3
Iron	EPA Method 200.7 ICP*	7	21
Lead	EPA Method 239.2 AA, furnace	1	3

Table 5			
Parameter	Sampling Method	Estimated Detection Level, $\mu\text{g/L}$	Interim Minimum Level & Lowest Calibration, $\mu\text{g/L}$
Manganese	EPA Method 243.1 AA, flame	10	30
Mercury	EPA Method 245.2 Cold Vapor, Auto.	0.2	1
Nickel	EPA Method 249.2 AA, furnace	1	3
Selenium	EPA Method 270.2 or 270.3 AA, furnace or hydride	2	6
Silver	EPA Method 272.2 AA, furnace	0.2	1
Zinc	EPA Method 200.7, ICP	2	6
*ICP = Inductively coupled plasma			

2. For purposes of reporting on the Discharge Monitoring Report (DMR), if a value is less than the method detection level, the permittee shall report "less than {numerical method detection level}" on the DMR. For example, if the laboratory reports "not detected" for a sample and states that the MDL is "5 $\mu\text{g/l}$ " then the permittee shall report "less than 5 $\mu\text{g/l}$ " on the DMR.
3. In the "Comment Section" of the DMR, the permittee shall report the Interim ML, the ML achieved, and the number of times non-detectable results were reported as zero.

F. Best Management Practices (BMP) Plan

1. The permittee shall develop a best management practices plan (the Plan) which prevents, or minimizes, the potential for the release of pollutants to waters of the United States through plant site runoff, spillage or leaks, or erosion for all sites. The permittee shall develop the Plan within 60 days of the effective date of this permit. The Plan is subject to EPA and ADEC review and approval. The Plan shall be implemented within 60 days of the approval of the Plan. The Plan shall be retained on site and made available to EPA and ADEC upon request. The Plan must be amended whenever there is a change in the facility or in the operation of the facility which materially increases the potential for an increased discharge of pollutants. These amendments shall be dated with the effective date of the

amendment. The permittee shall notify EPA of the amendment to the plan and submit them with the monthly DMR.

The Plan shall be consistent with the above objectives and the general guidance contained in Best Management Practices Guidance Document (U.S. EPA, 1981), any subsequent revisions, and Storm Water Management Plans for Industrial Activities (U.S. EPA, 1992). Any existing approved BMP plan may be modified for submittal and approval under this section.

2. Site Management Pollution Prevention Plan Requirements

The contents of the Plan shall include, at a minimum, the following items:

- a. Pollution Prevention Team. The Plan shall identify a specific individual or individuals within the facility organization as members of a Pollution Prevention Team. The Pollution Prevention Team shall be responsible for developing the Plan and assisting the facility or plant manager in its implementation, maintenance, and revision. The Plan shall clearly identify the responsibilities of each team member. The activities and responsibilities of the team shall address all aspects of the facility's Plan.
- b. Description of Activities. The Plan shall provide a narrative description of the activities taking place at the site which affect or may affect storm water runoff or which may result in the discharge of pollutants to surface waters during dry weather. The narrative description shall report the total acreage within the site, an estimate of the number of acres of disturbed land and an estimate of the total amount of land proposed to be disturbed throughout the life of the project. A general description of the location of the mining site relative to major transportation routes and communities shall also be provided.
- c. Description of Potential Pollutant Sources. The Plan shall identify all activities and significant materials which may potentially be significant storm water pollutant sources (including sediment) or may result in the discharge of pollutants during dry weather from the facility site. The Plan shall include, at a minimum:

- (1) Drainage.

- (a) A site topographic map shall be included in the Plan. At a minimum, the map shall identify and label the following areas:
- Site boundaries and access and haul roads;
 - The location of each storm water outfall and an outline of the portions of the drainage area that are within the facility boundaries;
 - Equipment storage, fueling and maintenance areas;
 - Materials handling areas;
 - Storage areas for chemicals and explosives;
 - Areas used for storage of overburden, materials, soils or wastes;
 - Location of drainage water (where water leaves mine);
 - Points of discharge from the property for drainage water;
 - Springs, streams, wetlands and other surface waters; and
- (b) For each area of the mine/mill site that generates storm water discharges associated with industrial activity or which may result in the discharge of pollutants during dry weather, the permittee shall provide a prediction of the direction of flow, and an identification of the types of pollutants (e.g., heavy metals) which are likely to be present in discharges. Factors to consider include the mineralogy of the ore and waste rock (e.g., acid forming), toxicity and quantity of chemical(s) used, produced or discharged; the likelihood of contact with storm water; and history of significant leaks or spills of toxic or hazardous pollutants. Flows with a significant potential for causing erosion shall be identified.
- (2) Inventory of Exposed Materials. For each storm water outfall the permittee shall develop an inventory of the types of materials handled at the site that potentially may be exposed to precipitation. The inventory shall include a narrative description of significant materials that have been handled, treated, stored or disposed in a manner to allow exposure to storm water between the time of 3 years prior to the date of the issuance of this permit and the present; method and location of onsite storage or disposal; materials management practices employed to minimize contact of materials with storm water runoff between the time of 3 years prior to the date of the issuance of this permit and the present; the location and a description of existing structural and nonstructural

control measures to reduce pollutants in storm water runoff; and a description of any treatment the storm water receives.

A summary of any existing ore or waste rock/overburden characterization data, including results of testing for acid rock generation potential shall be included in the inventory. If the ore or waste rock/overburden characterization data is updated due to a change in the ore type being mined, the storm water pollution prevention plan shall be updated with the new data.

- (3) Spills and Leaks. The permittee shall develop a list of significant spills and significant leaks of toxic or hazardous pollutants that occurred at areas that are exposed to precipitation, that drain to a storm water conveyance or drain to surface waters of the United States at the facility after the date of 3 years prior to the effective date of this permit. Such list shall be updated as appropriate during the term of the permit.
 - (4) Sampling Data. The permittee shall develop a summary of existing discharge sampling data describing pollutants in storm water discharges from the facility, including a summary of sampling data collected during the term of this permit.
 - (5) Risk Identification and Summary of Potential Pollutant Sources. A narrative description of the potential pollutant sources from the following activities associated with metal mining: loading and unloading operations; outdoor storage activities; outdoor manufacturing or processing activities; significant dust or particulate generating processes; and onsite waste disposal practices. The description shall specifically list any significant potential source of pollutants at the site and for each potential source, any pollutant or pollutant parameter (e.g., heavy metals, etc.) of concern shall be identified.
- d. Measures and Controls. The permittee shall develop a description of pollution prevention controls appropriate for the facility, and implement such controls. The appropriateness and priorities of controls in the Plan shall reflect identified potential sources of pollutants at the facility. The description of management controls shall address the following minimum components:

- (1) Good Housekeeping. Good housekeeping requires areas which may contribute pollutants to storm water discharges or areas which may result in the discharge of pollutants during dry weather, to be maintained in a clean, orderly manner.
- (2) Preventive Maintenance. A preventive maintenance program shall involve timely inspection and maintenance of storm water management devices (e.g., cleaning oil/water separators, catch basins) as well as inspecting and testing facility equipment and systems to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to surface waters, and ensuring appropriate maintenance of such equipment and systems. Particular attention shall be given to erosion control and sediment control systems and devices.
- (3) Spill Prevention and Response Procedures. Areas where potential spills which can result in significant amounts of pollutants reaching surface waters or areas where potential spills can contribute pollutants to storm water discharges, and their accompanying drainage points shall be identified clearly in the Plan. Where appropriate, specifying material handling procedures, storage requirements, and use of equipment such as diversion valves in the Plan should be considered. Procedures for cleaning up spills shall be identified in the Plan and made available to the appropriate personnel. The equipment necessary to implement a clean up should be readily available to personnel.
- (4) Inspections. The Plan shall identify qualified personnel that shall inspect designated equipment and mine areas at least on a monthly basis; however, inspections are not required when adverse weather conditions (e.g., snow) make the site inaccessible. All material handling areas shall be inspected for evidence of, or the potential for, pollutants entering the drainage system. Erosion control systems and sediment control devices shall also be inspected to determine if they are working properly. A set of tracking or follow-up procedures shall be used to ensure that appropriate actions are taken in response to the inspections. Records of inspections shall be maintained. The use of a checklist developed by the facility is encouraged.
- (5) Recordkeeping and Internal Reporting Procedures. A description of incidents (such as spills, or other discharges), along with other

information describing the quality and quantity of storm water discharges or dry weather discharges shall be included in the Plan required under this part. Inspections and maintenance activities shall be documented and records of such activities shall be incorporated into the Plan.

- (6) Employee Training. Employee training programs shall inform personnel of the components and goals of the Plan. Training should address topics such as spill response, good housekeeping, and material management practices. The Plan shall specify how often training shall take place, but in all cases training must be held at least semi-annually.
- (7) Sediment and Erosion Control. The Plan shall identify areas which, due to topography, activities, or other factors, have a high potential for significant erosion of soil and/or other materials, and identify measures to be used to limit erosion and/or remove sediment from storm water runoff. The measures to consider include diversion of flow away from areas susceptible to erosion, stabilization methods to prevent or minimize erosion, and structural methods for controlling sediment. These can include the following:

Diversion practices include the following: interceptor dikes and swales; diversion dikes, curbs and berms; pipe slope drains; subsurface drains; and drainage/storm water conveyance systems (channels or gutters; open top box culverts, and waterbars; rolling dips and road sloping; roadway surface water deflector; and culverts).

Stabilization practices include the following: temporary or permanent seeding; vegetative buffer strips; protection of trees; topsoiling; soil conditioning; contouring; mulching; geotextiles (matting; netting; or blankets); riprap; gabions; and retaining walls.

Structural practices include the use of the following: check dams; rock outlet protection; level spreaders; gradient terraces; straw bale barriers; silt fences; gravel or stone filter berms; brush barriers; sediment traps; grass swales; pipe slope drains; earth dikes; and other controls such as entrance stabilization, waterway crossings or wind breaks.

- (8) Management of Runoff. The Plan shall contain a narrative consideration of the appropriateness of traditional storm water management practices (practices other than those which control the generation or source(s) of pollutants) used to divert, infiltrate, reuse, or otherwise manage storm water runoff in a manner that reduces pollutants in storm water discharges from the site. The Plan shall provide for implementation and maintenance of the storm water practices that the permittee determines to be reasonable and appropriate. The potential of various sources at the facility to contribute pollutants to storm water discharges associated with industrial activity [see paragraph I.F.2.c of this section (Description of Potential Pollutant Sources)] shall be considered when determining reasonable and appropriate measures. Appropriate measures may include: vegetative swales and practices, reuse of collected storm water (such as for a process or as an irrigation source), inlet controls (such as oil/water separators), snow management activities, infiltration devices, and wet detention/retention devices, or impoundments.
- (9) Specific Management Practices. The following specific requirements shall be incorporated into the Plan:
- (a) Ensure that berms, including any pond walls, ditches, dikes, dams and similar water retention structures shall be constructed in a manner such that they reject the passage of unwanted water.
 - (b) Ensure that measures are taken such that pollutant materials removed from the wastewater streams will be retained and not discharged to waters of the United States.
 - (c) Ensure that all water control devices, including but not limited to structures and berms, and all solids retention structures such as berms, dikes, and pond structures and dams, shall be maintained to continue their effectiveness and to protect from unexpected and catastrophic failure.
 - (d) Ensure proper management of solid and hazardous waste in accordance with regulations promulgated under the Resource Conservation and Recovery Act (RCRA). Management practices required under RCRA regulations shall be referenced in the BMP Plan.

- (e) Delivery Vehicles. The plan must describe measures that prevent or minimize spills and/or contamination of storm water runoff from delivery vehicles arriving on the plant site. At a minimum the facility must:
- Develop procedures for the inspection of delivery vehicles arriving on the plant site, and ensure overall integrity of the body or container.
 - Develop procedures to deal with leakage or spillage from vehicles or containers, and ensure that proper protective measures are available for personnel and environment.
- (f) Fuel Oil Unloading Areas. The plan must describe measures that prevent or minimize spills and/or contamination of storm water runoff from fuel oil unloading areas. At a minimum the facility must use the following measures or their equivalent:
- Use containment curbs in unloading areas
 - During deliveries station personnel familiar with spill prevention and response procedures must be present to ensure that any leaks or spills are immediately contained and cleaned up.
 - Use spill and overflow protection (drip pans and other containment devices shall be placed beneath fuel oil connectors to contain any spillage that may occur during deliveries or due to leaks at the connectors).
- (g) Chemical Loading/Unloading Areas. The plan must describe measures that prevent or minimize spills and/or the contamination of storm water runoff from chemical loading/unloading areas. At a minimum the permittee must use the following measures or their equivalent:
- use containment curbs at chemical loading/unloading areas to contain spills
 - During deliveries station personnel familiar with spill prevention and response procedures must be present to

ensure that any leaks or spills are immediately contained and cleaned up.

Where practicable chemical loading/unloading areas should be covered.

- (h) Miscellaneous Loading/Unloading Areas. The plan must describe measures that prevent or minimize spills and/or the contamination of storm water runoff from loading and unloading areas. The facility may consider covering the loading area, minimizing storm water run-on to the loading area by grading, berming, or curbing the area around the loading area to direct away from the area, or locate the loading/unloading equipment and vehicles so that leaks can be contained in existing containment and flow diversion systems.
- (i) Liquid Storage Tanks. The plan must describe measures that prevent or minimize spill and/or contamination of storm water runoff from above ground liquid storage tanks. At a minimum the facility must employ the following measures or their equivalent:
- Use protective guards around tanks
 - Use containment curbs
 - Use spill and overflow protection (drip pans and other containment devices shall be placed beneath chemical connectors to contain any spillage that may occur during deliveries or due to leaks at these connectors)
 - Use dry cleanup methods
- The plan must describe measures to reduce the potential for an oil spill, or a chemical spill. At a minimum the structural integrity of all above ground tanks, pipelines, pumps and other related equipment shall be visually inspected on a weekly basis.
- (j) Residue Hauling Vehicles. All residue hauling vehicles shall be inspected for proper covering over the load, adequate gate sealing and overall integrity of the body or container.
- (k) Outfall 001 - Phase 1 (Care and Maintenance).

- Limit personnel and vehicular activity in this underground drainage area to that necessary to perform authorized activities and to avoid areas of the mine where activity would cause turbidity to exceed 20 NTU or TSS to exceed 20 mg/l in the drainage tunnel discharge.
- Conduct work activities in wet areas using appropriate BMPs to limit the amount of sediment entering the Gold Creek Drainage Tunnel to the levels indicated above. Before proceeding with such work activities, the company will prepare a work plan and submit the plan to ADEC for approval.
- Use the following methods to limit sediment entry to the Gold Creek Drainage Tunnel when special work activities are undertaken:
 - Use passive treatment methods such as silt fences, straw bales and settling ponds to reduce sediment in water discharged to the Gold Creek drainage tunnel.
 - Divert water around work areas by use of dams, sumps and pump installations.
 - Provide active treatment underground, such as flocculent logs, to promote water clarification. Any chemical treatment used would be done in accordance with State and Federal standards using chemicals approved for use in potable water treatment systems.
- Place fuel oil and hydraulic oil stored underground in properly sized and constructed secondary containment areas.
- Maintain spill response material underground of the types and quantities appropriate to cleanup the quantity of oil or other authorized substances in use and stored underground.

(I) Outfall 001 - Phase 2 (Exploration).

- Install and maintain continuous turbidity and flow rate monitoring at the Gold Creek Drainage Tunnel adit.
- Pump all diamond drill cuttings to settling pumps and reuse the drill water to the extent feasible.

- Discharge drill water to the Gold Creek Drainage Tunnel directly from the primary settling pump if the turbidity is 20 NTU or less. If the primary sump does not produce water of acceptable turbidity a secondary sump, including appropriate forms of treatment, may be used prior to releasing water to the drain tunnel. Active treatment shall be as described for Phase I BMPs.
 - Limit rod lubricants, settling agents and drilling muds to those specifically approved by EPA and ADEC.
 - Remove from mine any chemicals or similar substances which are no longer being used or required to meet Company objectives.
- (m) Outfall 002 - Phase 1 (Pumping Down to 6-Level).
- Position the low-water cut-off float at least three feet above the pump suction. If water is pumped to within three feet of the suction, power to the pumping system will be automatically shut off and water will not continue to discharge. (The purpose of this BMP is to eliminate the hazard of discharging any hydrocarbon which could be floating on the surface of the water column.)
 - Visually inspect the water surface in the 53 winze at least two times per week for oil sheen or other unusual conditions.
 - During bi-weekly inspections, remove any wood or debris found on the surface of the water in the 53 winze.
 - Collect a sample weekly from the water surface in the 53 winze. If oil is observed during the inspection or found in the lab test, use appropriate absorbents or other means to remove the oil from the water surface. Test for TAH and oil and grease.
 - Gage the flow of water in Gold Creek on a periodic basis throughout the period in which water is being discharged from the Ebner filtration plant. Weekly gaging is required as stream flows begin to decrease in late fall and winter. When flow at the Basin Road steel bridge reaches 30 cfs or less, discharge from the filtration plant shall be discontinued. Gaging may be accomplished in any of the following ways:
 - Utilize information from the USGS gauging station to determine creek flow upstream of the CBJ well field.

- Subtract 8 cfs from the gaged flow to approximate the effect on Gold Creek of pumping water from the well field;
- Conduct a rating study of Gold Creek at the AEL&P flume diversion weir to establish gage heights versus flow rates; or
- Gage the stream directly at the steel bridge using standard flow metering devices.
- Maintain the filter plant, pipelines, and diffuser system in good working order and provide good housekeeping around the site.
- Inspect the filter plant twice weekly and confirm that all automatic equipment is functioning within specifications. Use field test equipment to measure turbidity and conductivity of the discharge and compare with the installed equipment values to ensure that the filtration equipment is functioning properly.
- Record the treated flow quantity on a weekly basis and calculate the average flow rate. Adjust the flow control valve so that the average flow rate doesn't exceed 400 gpm.
- Include information associated with filtration plant operation in monthly DMRs.

(n) Outfall 002 - Phase 2 (6-level Transition).

This Phase involves the activities and best management practices to be undertaken after the water level in the deep north stopes reaches a depth of approximately one-foot above the sill elevation of 6-level as measured at the 53 winze. The transition will be complete when ADEC approval is received to resume discharge of water from the deep north beginning at a nominal depth of one-foot below the sill elevation of 6-level.

- temporarily cease discharge to Gold Creek when the water level reaches a depth of one-foot above the 6-level sill. Initiate recycling of the 53 winze pump discharge back to the deep north through the 800 stope drop raise.
- Visually monitor and log field observation of water entering the 53 winze opening through the 6-level

passageway for oil, turbidity and other contaminants. Collect surface water samples for laboratory analysis for TAH and for oil and grease. Estimate the flow rate of water reaching the 53 winze through the 6-level passageways.

- From points where 6-level intersects the 800 stope make visual inspections of the water surface inside the stope. If a visual oil sheen exists, prepare a plan for mitigation.
- Construct dams in the 6-level passageways connected to the 53 winze in order to block flow on this level from entering the pumping system. This will modify the route of water flow into the pump system so that the water between 6-level and 7-level can be characterized.
- Recirculate water from the 53 winze through the drop raise to characterize the water contained in the underground workings between 6-level and 7-level.
- Collect water samples from the pump discharge after 24 hours. Monitor for all constituents in Table 1A, including TAH, oil and grease (no visible sheen), arsenic, iron, lead, manganese, zinc, sulfate, TDS, turbidity, conductivity and TSS, but excluding whole effluent toxicity. If TSS exceeds 5 mg/l or turbidity exceeds 5 NTU include a dissolved method of analysis for the metals listed above in addition to the total recoverable method.
- Resume discharging from the Outfall 002 to Gold Creek if test results indicate that the water quality will meet permit requirements.
- Increase sample frequency to a daily basis following resumption of discharge. During this period, the discharge will be sampled for TAH, oil and grease, turbidity and conductivity. After seven days, sampling frequency will resume to normal permit monitoring requirements. Results of the testing will be included in the DMR.
- Should additional pumping be necessary to meet lease requirements, pumping will continue from the deep north through the 53 winze using the protocol described for Outfall 002 - Phase 1, until 7-level is reached. The protocol for Phase 2 will then be repeated. Phase 1 and Phase 2 will be repeated to levels 8 and 9.

(o) Ebner Adit Phase 1 (Care and Maintenance).

- Limit personnel activity in this adit to that necessary to perform authorized care and maintenance activities.
- Conduct work activities in wet areas using special techniques to limit sediment discharge from the portal. These include passive means such as settling, silt fences and straw bales to reduce sediment discharge from the portal. Active methods such as floc logs may also be incorporated in a treatment program.
- Pump water back to the deep north stopes when sediment produced from activities in the adit cannot be controlled satisfactorily with passive or active treatment methods.

(p) Ebner Adit Phase 2 (Exploration).

- Pump collected water into the mine (deep north stopes) for settling and possible discharge through the Ebner Filter Plant.
- Pump all diamond drill cuttings to settling sumps and reuse the drill water to the extent feasible. Excess drill water will be discharged to the deep north stopes for additional settling and possible discharge through the Ebner Filter Plant.
- Limit rod lubricants, settling agents and drilling muds to those specifically approved by EPA and ADEC.

(q) Alexander Adit Phase 1 (Care and Maintenance).

- Limit personnel activity in this adit to that necessary to perform authorized activities and to meet other operational requirements of the mine.
- Conduct work activities in wet areas using special techniques if necessary to limit sediment discharged from the portal. These include passive methods such as settling, silt fences and straw bales to reduce sediment

discharge from the portal. Active methods such as floc logs may also be incorporated in a treatment program.

(r) Alexander Adit Phase 2 (Exploration).

- Increased level of activity over that described in Phase 1, but will not significantly change the type of activity or the responses necessary to maintain the existing quality of water being discharged from the portal.

(s) Level "00" Adit Phase 1 (Care and Maintenance).

- Limit personnel activity in this adit to that necessary to perform authorized activities and to meet other operational requirements of the mine. Because external access is not possible and internal access is very difficult, very little activity will occur on this level. There are no mine workings above this level which also limits the possibility of human activity having an influence on water discharged from this portal.
- Conduct work activities in wet areas using special techniques to limit sediment discharge from the portal. These include passive means such as settling, silt fences and straw bales to reduce sediment discharge from the portal. Active methods such as floc logs may also be incorporated in a treatment program.

(t) Level "00" Adit Phase 2 (Exploration). No change in BMPs from described in Phase 1.

(u) Sheep Creek Adit Phase 1 (Care and Maintenance).

- Limit activity in this underground drainage area to that necessary to perform authorized activities.
- Maintain vehicular access to prevent the creation of sediment problems from normal traffic utilizing the Sheep Creek adit by proper grading and drainage control.
- Conduct work activities in wet areas using special techniques to limit sediment discharge from the portal. These include passive means such as

settling, silt fences and straw bales to reduce sediment discharge from the portal. Active methods such as floc logs may also be incorporated in a treatment program.

- Use the following methods to control sediment discharge from the Sheep Creek portal when special work activities are undertaken:
 - Use silt fences and straw bales in water ways.
 - Divert water around work areas by the temporary use of dams, sumps and pumping.
 - Although passive methods will be the primary means of providing underground treatment, active treatment methods such as flocculent logs may be employed when necessary. Any chemical treatment used will comply with State and Federal standards for use in potable water treatment systems.
- Maintain spill response material underground and/or at surface in sufficient quantities to cleanup the quantity of oil in use and stored in the Sheep Creek adit area in the event of a spill.
- Maintain surface sediment traps, settling ponds, infiltration ponds and drainageways as required under the final BMP plan. Sheep Creek portal sediment basin dikes and the surrounding area shall be vegetated with locally occurring species, including woody plants such as willow and alder.

(v) Sheep Creek Adit Phase 2 (Exploration).

- Pump all diamond drill cuttings to settling sumps and reuse the drill water to the extent feasible.
- If increased activity in this drainage causes sediment levels (TSS) in excess of 20 mg/l, provide active treatment so that the discharge from the settling pond does not exceed 20 mg/l.

(w) Sheep Creek Surface Facility Site Runoff

- Improvements shall be made to the present facility, as appropriate, to:
 - Clean up, contain, and dispose of hazardous and toxic materials;
 - Regrade and stabilize slopes to minimize surface flow, concentration, and control soil erosion;
 - Plant self-sustaining vegetation - locally occurring species, including woody plants [e.g., willow and alder] - on exposed slopes.
- Additional water management, settling, or appropriate BMPs shall be implemented prior to beginning new activity at this site.

(x) Sheep Creek Road Runoff

- Water crossing structures shall be installed in a manner to minimize disturbance of streambed or streambank erosion, or other adverse impacts on water quality and fish habitat. Drainage features such as ditches, cross drains, crowning, outsloping, culverts and bridges shall be maintained to prevent blockage and erosion.
- During operations, the road surface shall be kept crowned or sloped to control drainage.
- Where culvert icing conditions are to be expected, alternate drainage designs such as open flumes buried in the road surface shall be considered instead of culverts.
- When a flume, downspout, downfall culvert, or similar structure is used to protect fill slopes or to return water to its natural course, the discharge point shall be protected from erosion by:
 - reducing the velocity of the water;
 - using rock spillways, rip-rap, or splash plates; or
 - using equally effective methods or structures.
- If a settling basin is used, the permittee shall keep an adequate reserve volume; sediment removed from a settling basin during maintenance operations must be

deposited in a location where it is not likely to enter nearby surface waters.

- Areas of exposed soil shall be stabilized to the extent feasible at the normal angle of repose or less. In areas where this is not feasible, and the potential for significant water quality degradation exists, alternate stability methods shall be employed and included in the final BMP plan.
 - Endemic species shall be used for vegetation of disturbed areas.
 - The permittee shall abate, reconstruct, repair, rehabilitate, and/or restore, as soon as practicable, any water quality degradation caused by the operation or maintenance of the access road. This work shall be immediately reported to ADEC.
 - All equipment movement and clearing shall be kept to a minimum and within the existing developed road corridor (cuts, fills, drainage structures) and shall be conducted in a manner so as to minimize damages to surface vegetation resources. Vegetation disturbances shall be reported immediately to ADEC.
 - The access road and associated structures shall include erosion control and drainage features that will minimize the concentration of water and thereby reduce erosive effects.
 - All disturbed areas shall be left in stabilized condition. Stabilization practices, as determined by the needs of specific sites, shall include seeding, fertilizing, planting, mulching, and the placement of mat binders, soil binders, rock or gravel blankets or structures. All work requiring stabilization shall be immediately reported to ADEC.
- e. Consistency With Other Plans. The Plan may reference the existence of other plans for Spill Prevention Control and Countermeasure (SPCC) plans developed for the facility under Section 311 of the CWA or Best

Management Practices (BMP) Programs otherwise required by an NPDES and/or mining permit for the facility as long as such requirement is incorporated into the Plan.

3. Comprehensive Site Compliance Evaluation. Qualified personnel shall conduct site compliance evaluations at appropriate intervals specified in the Plan, but in no case less than twice a year. Such evaluations shall provide:
 - a. Site Evaluation. Areas contributing to a storm water discharge associated with industrial activity or areas where a discharge of pollutants may occur during dry weather shall be visually inspected for evidence of, or the potential for, pollutants entering the drainage system. Measures to reduce pollutant loadings shall be evaluated to determine whether they are adequate and properly implemented in accordance with the terms of the permit or whether additional control measures are needed. Structural storm water management measures, sediment and erosion control measures, and other structural pollution prevention measures identified in the Plan shall be observed to ensure that they are operating correctly. A visual inspection of equipment needed to implement the Plan, such as spill response equipment, shall be made.
 - b. Corrective Action. Based on the results of the inspection, the description of potential pollutant sources identified in the Plan in accordance with paragraph I.F.2.c. (Description of Potential Pollutant Sources) of this section and pollution prevention measures and controls identified in the Plan in accordance with paragraph I.F.2.d. (Measures and Controls) of this section shall be revised as appropriate within 2 weeks of such inspection and shall provide for implementation of any changes to the plan in a timely manner, but in no case more than 12 weeks after the inspection.
 - c. Record keeping and Reporting Requirements. A report summarizing the scope of the inspection, personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of the Plan, and actions taken in accordance with paragraph I.F.3.b (above) of the permit shall be made and retained as part of the Plan for at least 1 year after coverage under this permit terminates. The report shall identify any incidents of noncompliance. Where a report does not identify any incidents of noncompliance, the report shall contain a certification that the facility is in compliance with

the Plan and this permit. The report shall be signed in accordance with Part IV.H. (Signatory Requirements) of this permit.

G. Quality Assurance Project Plan

1. The permittee shall develop a Quality Assurance Project Plan (QAPP) to assist in planning for the collection and analysis of environmental samples in support of the permit and in explaining data anomalies when they occur. Any existing approved plans may be modified for submittal and approval under this section.
 - a. Throughout all sample collection and analysis activities, the permittee shall use the EPA-approved quality assurance, quality control, and chain-of-custody procedures described in Interim Guidelines and Specifications For Preparing Quality Assurance Project Plans, QAMS-005/80, December 29, 1980. The permittee's QAPP shall be prepared in the format which is specified in QAMS-005/80. The following two references may be helpful in preparing the QAPP for this permit:

You and Quality Assurance in Region 10, EPA, Regional 10, Quality and Data Management Program, March 1988.

Example Format and Critical Elements of Quality Assurance Plan, EPA, Region 10, Quality and Data Management Program.
 - b. The QAPP shall include details on the number of samples, type of sample containers, preservation of samples, holding times, analytical detection and quantitation limits (or method detection level and minimum level for metals) for each target compound, analytical methods, type and number of quality assurance field samples, precision and accuracy requirements, sample preparation requirements, sample shipping methods, and laboratory data delivery requirements.
 - c. The QAPP shall specify the collection and analysis of quality assurance samples for each sampling event, such as (1) matrix spiked (MS) and duplicate samples on ten percent of samples; and (2) analysis of Field Transfer Blanks (sample blanks) to identify contamination of samples.
 - d. Duplicate samples are not required for the following parameters: temperature, turbidity.

- e. Matrix spiked samples are not required for the following tests listed in Table 1 of 40 CFR Part 136: acidity, alkalinity, bacteriological tests, chlorine, dissolved oxygen, hardness, pH, residues (solids), temperature, turbidity.
 - f. The permittee shall amend the QAPP, whenever there is a modification in the sample collection, the sample analysis, or whenever conditions or requirements of the QAPP change.
 - g. Name(s), address(es) and telephone number(s) of the laboratories, used by or proposed to be used by the permittee, shall be specified in the QAPP.
 - h. Copies of QAPP shall be kept on site and shall be made available to EPA and ADEC upon request.
2. The permittee shall submit its QAPP to EPA and ADEC for review and approval within 120 days of the effective date of this permit.
 3. Upon QAPP's approval from EPA, the permittee shall implement the provisions of the QAPP required under this Part as a condition of this permit. *Non-compliance with the conditions and requirements of QAPP shall constitute non-compliance with this permit.*
 4. The permittee shall require the laboratory director of each laboratory providing measurement results in support of this permit to sign and submit to EPA the following statement on a monthly basis with the DMR:

I certify that this data is in compliance with requirements under 40 CFR Part 136 and other analytical requirements specified in this NPDES permit, No. AK-004951-4.

Signature: _____ **Date:** _____

5. Within 30 days of sample analysis, the permittee shall ensure that all data used in support of this permit are validated. Data validation results shall be kept on site and shall address the elements described in the following references:

Draft Laboratory Data Validation Functional Guidelines For Evaluating Inorganic Analyses, July 1, 1988.

Draft National Functional Guidelines For Organic Data Review, Revised:
June 1991.

Laboratory Data Validation Functional Guidelines For Evaluating Organics
Analyses, February 1, 1988.

Parameters not addressed in the above documents should also be validated using the same guidelines. Data validation records shall be kept on site and made available to EPA and ADEC upon request.

6. The permittee shall obtain and archive the following types of documents for sample collection, shipment, and analyses:

All Sample Tracking Reports (i.e., the signed chain-of-custody forms and the signed packing lists)

Sample Log-In Forms

All of the Sample tags and Air or Freight Bills

Custody seals

Any telephone logs referring to the samples

Case Narrative signed by the laboratory manager or his/her designee certifying the accuracy and validity of all data reported and describing any changes or problems encountered during the analyses along with documenting their resolution(s)

Tabulated sample results, with units, percent solids, and sample weights or volumes clearly specified

Blank data with tabulated results. Specify which samples go with which blank

Surrogate spike analysis result summaries with calculated percent recovery values

Matrix Spike/Duplicate (MS/D) result summaries with calculated percent recovery and relative percent difference values

Sample data from laboratories including:

- All tabulated results
- All data system printouts
- Manual worksheets (log books, logs of any preparation of samples)
- Extraction, dilution and cleanup logs and percent moisture for all samples, blanks
- Continuing Calibration Standard forms that include the laboratory name, laboratory code, Job Number, SDG number, calibration sources, concentration units, analytes, true values, found values and the calculated percent Recovery (%R)
- The Initial Calibration curve(s) labeled with date and time of preparation
- Bench sheets for sample preparation and analysis of samples and standards indicating dates, times, methods of sample digestion/preparation and analysis, and volumes/amounts/concentrations of standard and reagents added, instrument run time/date, dilutions made, etc.
- Preparation/weight logs for percent moisture determinations. All bench sheets and logs will be labeled with the date and shall bear the analyst's signature.

Raw Quality Control data from laboratories including:

- Blank data in chronological order:
 - i) Tabulated results
 - ii) All blank data system printouts
- MS/D data in chronological order:
 - i) Tabulated results
 - ii) All MS/D data system printouts

The above documentation shall be kept on site and made available to EPA and ADEC upon request.

7. The permittee shall archive sample data and project records for three years from the date of sample analysis.
8. Each year, by December 31, the permittee shall provide written verification to EPA and ADEC that all laboratories or contract laboratories used by the permittee in that year participate in quality assurance/quality control (QA/QC) programs which are equivalent to that required by EPA for EPA's contract laboratories (EPA Contract Laboratory Program).
9. The permittee shall ensure that all laboratories' QA plans address all elements specified in the following EPA document:

Guidance on Preparation of Laboratory Quality Assurance Plans, U.S. EPA Region 10, EPA 910/9-92-032, February 14, 1991.

Permittee's copies of the laboratories' QA plan(s) shall be made available upon request and shall be available for inspection at the permittee's offices.

10. Each year, by December 31, the permittee shall provide written verification to EPA and ADEC that all laboratories used in that year for the purpose of measuring permit samples have facilities, equipment, staff, quality assurance programs, and quality control procedures to perform sample measurements in support of this permit. The permittee may conduct an on-site Technical Systems Audit of the laboratories to make this determination.
11. The permittee may obtain copies of all references cited in this part of the permit from the following address:

Quality and Data Management Program
Environmental Services Division
U.S. EPA, Region 10
1200 6th Avenue, OEA-095
Seattle, Washington 98101

II. MONITORING, RECORDING AND REPORTING REQUIREMENTS

A. Representative Sampling (Routine and Non-Routine Discharges).

The Permittee shall collect all effluent samples from the effluent stream prior to discharge into the receiving waters. Samples and measurements shall be representative of the volume and nature of the monitored discharge.

In order to ensure that the effluent limits set forth in this permit are not violated at times other than when routine samples are taken, the Permittee shall collect additional samples at the appropriate outfall(s) whenever any discharge occurs that may reasonably be expected to cause or contribute to a violation that is unlikely to be detected by a routine sample. The Permittee shall analyze the additional samples for those parameters limited in Part I of this permit that are likely to be affected by the discharge.

The Permittee shall collect such additional samples as soon as possible after the spill or discharge. The samples shall be analyzed in accordance with paragraph D., below. In the event of an anticipated bypass, as defined in Part III. of this permit, the Permittee shall collect and analyze additional samples as soon as the bypassed effluent reaches the outfall. The Permittee shall report all additional monitoring in accordance with paragraph E., below.

- B. Reporting of Monitoring Results.** The Permittee shall summarize monitoring results each month on the Discharge Monitoring Report (DMR) form (EPA No. 3320-1). The Permittee shall submit reports monthly, postmarked by the 10th day of the following month. The Permittee shall sign and certify all DMRs, and all other reports, in accordance with the requirements of Part IV.E. of this permit ("Signatory Requirements"). The Permittee shall submit the legible originals of these documents to the Director, Office of Water, with copies to ADEC at the following addresses:

United States Environmental Protection Agency
Region 10
1200 Sixth Avenue, OW-133
Seattle, Washington 98101

Alaska Department of Environmental Conservation
410 Willoughby Avenue, Suite 105
Juneau, Alaska 99801

- C. Monitoring Procedures.** Monitoring must be conducted according to test procedures approved under 40 CFR 136, unless other test procedures have been specified in this permit.
- D. Additional Monitoring by Permittee.** If the Permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR 136 or as specified in this permit, the Permittee shall include the results of this monitoring in the calculation and reporting of the data submitted in

the DMR. The Permittee shall indicate on the DMR whenever it has performed additional monitoring, and shall explain why it performed such monitoring.

Upon request by the Director, the Permittee shall submit results of any other sampling, regardless of the test method used.

E. Records Contents. All effluent monitoring records shall bear the hand-written signature of the person who prepared them. In addition, all records of monitoring information shall include:

1. the date, exact place, and time of sampling or measurements;
2. the names of the individual(s) who performed the sampling or measurements;
3. the date(s) analyses were performed;
4. the names of the individual(s) who performed the analyses;
5. the analytical techniques or methods used; and
6. the results of such analyses.

F. Retention of Records. The Permittee shall retain records of all monitoring information, including, but not limited to, all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, copies of DMRs, a copy of the NPDES permit, and records of all data used to complete the application for this permit, for a period of at least five years from the date of the sample, measurement, report or application, or for the term of this permit, whichever is longer. This period may be extended by request of the Director or ADEC at any time.

G. Twenty-four Hour Notice of Noncompliance Reporting.

1. The Permittee shall report the following occurrences of noncompliance by telephone within 24 hours from the time the Permittee becomes aware of the circumstances:
 - a. any noncompliance that may endanger health or the environment;

- b. any unanticipated bypass that results in or contributes to an exceedance of any effluent limitation in the permit (See Part III.G., "Bypass of Treatment Facilities");
 - c. any upset that results in or contributes to an exceedance of any effluent limitation in the permit (See Part III.H., "Upset Conditions"); or
 - d. any violation of a maximum daily discharge limitation for any of the pollutants listed in the permit.
2. The Permittee shall also provide a written submission within five days of the time that the Permittee becomes aware of any event required to be reported under subpart 1 above. The written submission shall contain:
 - a. a description of the noncompliance and its cause;
 - b. the period of noncompliance, including exact dates and times;
 - c. the estimated time noncompliance is expected to continue if it has not been corrected; and
 - d. steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
 - e. the results of any monitoring data required under Part II.A., above.
3. The Director may, at his sole discretion, waive the written report on a case-by-case basis if the oral report has been received within 24 hours by the NPDES Compliance Unit in Seattle, Washington, by telephone, (206) 553-1846
4. Reports shall be submitted to the addresses in Part II.B. ("Reporting of Monitoring Results").

H. Other Noncompliance Reporting. The Permittee shall report all instances of noncompliance, not required to be reported within 24 hours, at the time that monitoring reports for Part II.B. are submitted. The reports shall contain the information listed in Part II.G.2. of this permit.

I. Changes in Discharge of Toxic Substances. The Permittee shall notify the Director and ADEC as soon as it knows, or has reason to believe:

1. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in the permit, if that discharge may reasonably be expected to exceed the highest of the following "notification levels":
 - a. One hundred micrograms per liter (100 $\mu\text{g/L}$);
 - b. Two hundred micrograms per liter (200 $\mu\text{g/L}$) for acrolein and acrylonitrile; five hundred micrograms per liter (500 $\mu\text{g/L}$) for 2,4-dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;
 - c. Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7); or
 - d. The level established by the Director in accordance with 40 CFR 122.44(f).

2. That any activity has occurred or will occur that would result in any discharge, on a non-routine or infrequent basis, of any toxic pollutant that is not limited in the permit, if that discharge may reasonably be expected to exceed the highest of the following "notification levels":
 - a. Five hundred micrograms per liter (500 $\mu\text{g/L}$);
 - b. One milligram per liter (1 mg/l) for antimony;
 - c. Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7); or
 - d. The level established by the Director in accordance with 40 CFR 122.44(f).

III. COMPLIANCE RESPONSIBILITIES

- A. Duty to Comply.** The Permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification, or for denial of a permit renewal application. The Permittee shall give reasonable advance notice to the Director and ADEC of any planned

changes in the permitted facility or activity that may result in noncompliance with permit requirements.

B. Penalties for Violations of Permit Conditions.

1. **Civil Penalties.** Sections 309(d) and 309(g) of the Act provide that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act shall be subject to a civil or administrative penalty, not to exceed \$27,500 per day for each violation.
2. **Criminal Penalties:**
 - a. **Negligent Violations.** Section 309(c)(1) of the Act provides that any person who negligently violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act shall be punished by a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than 1 year, or by both.
 - b. **Knowing Violations.** Section 309(c)(2) of the Act provides that any person who knowingly violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act shall be punished by a fine of not less than \$5,000 nor more than \$50,000 per day of violation, or by imprisonment for not more than 3 years, or by both.
 - c. **Knowing Endangerment.** Section 309(c)(3) of the Act provides that any person who knowingly violates a permit condition implementing Sections 301, 302, 303, 306, 307, 308, 318, or 405 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both. A person that is an organization shall be subject to a fine of not more than \$1,000,000.
 - d. **False Statements.** Section 309(c)(4) of the Act provides that any person who knowingly makes any false material statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under this Act or who knowingly falsifies, tampers with, or renders inaccurate any monitoring

device or method required to be maintained under this Act, shall be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or by both.

Except as provided in permit conditions in Part III.G., ("Bypass of Treatment Facilities") and Part III.H., ("Upset Conditions"), nothing in this permit shall be construed to relieve the Permittee of the civil or criminal penalties for noncompliance.

- C. Need to Halt or Reduce Activity not a Defense.** It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with this permit.
- D. Duty to Mitigate.** The Permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.
- E. Proper Operation and Maintenance.** The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when the operation is necessary to achieve compliance with the conditions of the permit.
- F. Removed Substances.** Solids, sludges, or other pollutants removed in the course of treatment or control of water and wastewaters shall be disposed of in a manner such as to prevent any pollutant from such materials from entering navigable waters, except as specifically authorized in Part I.A.
- G. Bypass of Treatment Facilities.**
1. Bypass not exceeding limitations. The Permittee may allow any bypass to occur that does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs 2 and 3 of this Part.
 2. Notice.

- a. Anticipated bypass. If the Permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least 10 days before the date of the bypass.
 - b. Unanticipated bypass. The Permittee shall submit notice of an unanticipated bypass as required under Part II.G. ("Twenty-four Hour Notice of Noncompliance Reporting").
3. Prohibition of bypass.
- a. Bypass is prohibited, and the Director or ADEC may take enforcement action against the Permittee for a bypass, unless:
 - (1) The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
 - (2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment shall have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance; and
 - (3) The Permittee submitted notices as required under paragraph 2 of this Part.
 - b. The Director and ADEC may approve an anticipated bypass, after considering its adverse effects, if the Director and ADEC determine that it will meet the three conditions listed above in paragraph 3.a. of this Part.

H. Upset Conditions.

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the Permittee meets the requirements of paragraph 2 of this Part. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

2. Conditions necessary for a demonstration of upset. To establish the affirmative defense of upset, the Permittee shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - a. An upset occurred and that the Permittee can identify the cause(s) of the upset;
 - b. The permitted facility was at the time being properly operated;
 - c. The Permittee submitted notice of the upset as required under Part II.G., Twenty-four Hour Notice of Noncompliance Reporting; and
 - d. The Permittee complied with any remedial measures required under Part III.D., Duty to Mitigate.
 3. Burden of proof. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an upset has the burden of proof.
- I. Toxic Pollutants.** The Permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.
- J. Planned Changes.** The Permittee shall give notice to the Director and ADEC as soon as possible of any planned physical alterations or additions to the permitted facility whenever:
1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source as determined in 40 CFR 122.29(b); or
 2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are subject neither to effluent limitations in the permit, nor to notification requirements under Part II.I.

The Permittee shall give notice to the Director and ADEC as soon as possible of any planned changes in process or chemical use whenever such change could significantly change the nature or increase the quantity of pollutants discharged.

K. Anticipated Noncompliance. The Permittee shall also give advance notice to the Director and ADEC of any planned changes in the permitted facility or activity that may result in noncompliance with this permit.

IV. GENERAL PROVISIONS

A. Permit Actions. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

B. Duty to Reapply. If the Permittee intends to continue an activity regulated by this permit after the expiration date of this permit, the Permittee must apply for and obtain a new permit. The application shall be submitted at least 180 days before the expiration date of this permit.

C. Duty to Provide Information. The Permittee shall furnish to the Director and ADEC, within the time specified in the request, any information that the Director or ADEC may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The Permittee shall also furnish to the Director or ADEC, upon request, copies of records required to be kept by this permit.

D. Other Information. When the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or that it submitted incorrect information in a permit application or any report to the Director or ADEC, it shall promptly submit the omitted facts or corrected information.

E. Signatory Requirements. All applications, reports or information submitted to the Director and ADEC shall be signed and certified.

1. All permit applications shall be signed as follows:
 - a. For a corporation: by a responsible corporate officer.
 - b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively.
 - c. For a municipality, state, federal, or other public agency: by either a principal executive officer or ranking elected official.

2. All reports required by the permit and other information requested by the Director or ADEC shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - a. The authorization is made in writing by a person described above and submitted to the Director and ADEC, and
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company.
3. Changes to authorization. If an authorization under Part IV.E.2. is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph IV.E.2. must be submitted to the Regional Administrator and ADEC prior to or together with any reports, information, or applications to be signed by an authorized representative.
4. Certification. Any person signing a document under this Part shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

- F. Availability of Reports.** Except for data determined to be confidential under 40 CFR 2, all reports prepared in accordance with this permit shall be available for public inspection at the offices of the Director and ADEC. As required by the Act, permit applications, permits and effluent data shall not be considered confidential.

G. Inspection and Entry. The Permittee shall allow the Director, ADEC, or an authorized representative (including an authorized contractor acting as a representative of the Administrator), upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
4. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the Act, any substances or parameters at any location.

H. Oil and Hazardous Substance Liability. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the Permittee from any responsibilities, liabilities, or penalties to which the Permittee is or may be subject under Section 311 of the Act.

I. Property Rights. The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

J. Severability. The provisions of this permit are severable. If any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

K. Transfers. This permit may be automatically transferred to a new Permittee if:

1. The current Permittee notifies the Director at least 30 days in advance of the proposed transfer date;

2. The notice includes a written agreement between the existing and new Permittees containing a specific date for transfer of permit responsibility, coverage, and liability between them; and
3. The Director does not notify the existing Permittee and the proposed new Permittee of his or her intent to modify, or revoke and reissue the permit.

If the notice described in paragraph 3 above is not received, the transfer is effective on the date specified in the agreement mentioned in paragraph 2 above.

L. State Laws. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the Permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by Section 510 of the Act.

M. Reopener Clause.

1. This permit shall be modified, or alternatively, revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the Act, as amended, if the effluent standard, limitation, or requirement so issued or approved:
 - a. Contains different conditions or is otherwise more stringent than any condition in the permit; or
 - b. Controls any pollutant or disposal method not addressed in the permit.

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Act then applicable.

2. This permit may be reopened to adjust any effluent limitations if future water quality studies, waste load allocation determinations, or changes in water quality standards show the need for different requirements.

V. DEFINITIONS

A. *Acute toxic unit* (TU_a) is a measure of acute toxicity. The number of acute toxic units in the effluent is calculated as 100/LC50, where the LC50 is measured in percent effluent.

- B. **ADEC** means the Alaska Department of Environmental Conservation.
- C. **Administrator** means the Administrator of the USEPA, or an authorized representative.
- D. **Bypass** means the intentional diversion of waste streams from any portion of a treatment facility.
- E. **Chronic toxic unit** (TU_c) is a measure of chronic toxicity. The number of chronic toxic units in the effluent is calculated as $100/NOEC$, where the NOEC is measured in percent effluent.
- F. **Daily discharge** means the discharge of a pollutant during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the daily discharge is the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in concentration, rates, or other units, the daily discharge is the average measurement of the pollutant over the day.
- G. **Daily maximum.** See Maximum daily discharge.
- H. **Director** means the Director of Office of Water, USEPA, or an authorized representative.
- I. **DMR** means discharge monitoring report.
- J. **EC₅₀** is a point estimate of the effluent concentration that would cause an observable adverse effect (such as death, immobilization, or serious incapacitation) in 50 percent of the test organisms exposed.
- K. **EPA** means the United States Environmental Protection Agency.
- L. **Final effluent** means effluent at, or upstream from, the point where a permitted outfall enters navigable waters, and through which all waste streams pass that are discharged from the outfall.
- M. **Grab sample** is a single sample or measurement taken at a specific time or over as short a period of time as is feasible.
- N. **LC₅₀** means the concentration of effluent that is acutely toxic to 50 percent of the test organisms exposed.

- O. **Maximum daily discharge limitation** or daily maximum means the highest allowable daily discharge.
- P. **Method Detection Limit (MDL)** means the minimum concentration of an analyte that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero as determined by a specific laboratory method.
- Q. **Minimum daily discharge limitation** means the lowest allowable daily discharge.
- R. **Minimum level (ML)** means the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. An interim ML is calculated when a method-specified ML does not exist. It is equal to 3.18 times the method-specified Method Detection Limit (MDL), rounded to the nearest 1, 2, 5, 10, 20, 50, etc.
- S. **Monthly average** means the average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month. For fecal coliform bacteria, the monthly average is calculated as the geometric mean of all daily discharges measured during a calendar month.
- T. **NOEC** means no observable effect concentration. The no observed effect concentration (NOEC) is the highest concentration of toxicant to which organisms are exposed in a chronic test, that causes no observable adverse effect on the test organisms (e.g., the highest concentration of toxicant to which the values for the observed responses are not statistically significant different from the controls)¹.
- U. **QA/QC** means quality assurance/quality control.

¹ If in the calculation of a NOEC, two tested concentrations cause statistically adverse effects, but an intermediate concentration did not cause statistically significant effects, the test should be repeated or the lowest concentration must be used. For example: 6.25, 12.5, 25, 50 and 100% effluent concentrations are tested. The 12.5 and 50% concentrations are statistically significant, but 25% is not significant. If the test is not repeated, then the NOEC is 6.25%.

- V. **Regional Administrator** means the EPA Region 10 Regional Administrator, or an authorized representative.
- W. **Severe property damage** means substantial physical damage to property, damage to the treatment facilities that causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
- X. **Sludge** means settled solids.
- Y. **Stormwater outfall** means a conveyance for stormwater runoff or snowmelt.
- Z. **24-hour composite sample** shall mean a flow-proportioned mixture of not less than 8 discrete aliquots. Each aliquot shall be a grab sample of not less than 100 ml and shall be collected and stored in accordance with procedures prescribed in the most recent edition of Standard Methods for the Examination of Water and Wastewater.
- AA. **Upset** means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
- BB. **Wastestream** means any non-de minimus stream of pollutants within the Permittee's facility that enters any permitted outfall or navigable waters. This includes spills and other unintentional, non-routine or unanticipated discharges.